

## Remarks

### Introduction

Claims 1-14 are pending in the application. The Examiner has indicated the allowability of claims 8-12. Claim 8 has been rewritten in independent form and therefore claims 8-12 should be allowed.

Further, the Examiner has asserted rejections under 35 U.S.C. §§ 112, 102, and 103. Applicants disagree. However, before describing Applicants' position in detail, it may be helpful to briefly review the background of the application.

As described in the specification, it may be beneficial to maintain a selected amount, or range, of actual oxidant storage in the emission control device to prevent lean excursions from saturating oxidant storage, or rich operation from depleting stored oxidants. Further, rather than passively reacting to the present oxidant storage capacity, it may be beneficial to take action to adjust the oxidant capacity by varying exhaust gas temperature, and thereby obtaining a desired capacity.

In this way, in some examples, a two pronged approach may be used, where each action is used to keep the amount of oxidants at a desired point relative to the capacity. Specifically, one example:

- (1) adjusts fuel based on comparison to control the amount of oxidants stored and maintain some available oxidant storage capacity, without depleting stored oxidants, and
- (2) adjusts an engine operating parameter to adjust capacity so that the desired capacity is present.

**Claims 1, 13, 16, and 19**

The Examiner has rejected claim 1 under 35 U.S.C. § 103 in view of Kitagawa et al. Applicants disagree.

As one example, Applicants respectfully submit that the Rejection fails to establish a *prima facie* case of obviousness because it fails to set forth proper motivation for modifying the disclosure of Kitagawa et al. to include the admittedly missing feature of adjusting an engine operating parameter to affect a temperature of the catalyst. In fact, the Rejection first admits that Kitigawa et al. "fail to specifically disclose that the engine operating parameter is adjusted to affect a temperature of the catalyst." However, the Rejection then goes on later to state that "thus, it is at least obvious to those with ordinary skill in the art that Kitagawa et al. adjust an engine operating parameter to affect a temperature of the catalyst."

As such, the Rejection admits the reference fails to show all features, and fails to allege any motivation for adding the missing features. Further, Kitagawa et al. fails to even recognize the advantages of adjusting the storage capacity via temperature in a system that adjusts controls oxidant storage capacity of a catalyst.

As such, the motivation to modify the reference is lacking, and the cited reference fails to show all claimed elements. This argument thus applies to claim 1, 13, and new claims 16 and 19.

Regarding claim 13, Bush et al. also fails to show adjusting catalyst temperature.

The remaining claims depend from these claims and therefore should be allowed.

**Objection to Reliance on Official Notice.**

Applicants object to, and do not accept or acquiesce to, the factual assertions made in the Rejection. Further, Applicants challenge the factual assertions made as not properly Officially Noticed, as well as the assertion that the alleged disclosure is "old and well known." Applicants also object to the Examiner's technical reasoning, including the reasoning with regard to claim 1.

**Claim 14 meets the requirements of 35 U.S.C. § 112, second paragraph.**

Regarding claim 14, the Examiner states:

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted element is: "a comparison between the estimate of the actual amount of oxidants stored in the catalyst and an estimate of an available oxidant storage capacity".

Page 2, Office Action mailed June 10, 2004.

However, Claim 14, reproduced below, with emphasis added, does indeed include this limitation.

14. The system of claim 13, wherein said controller adjusts a parameter indicative of engine spark in response to a comparison between said estimate of the actual amount of oxidants stored in the catalyst and an estimate of an available oxidant storage capacity.

Therefore, Applicants are unclear as to the basis for the Examiner's rejection, and submit that claim 14 meets the requirements of § 112. If the Examiner was referring to Claim 13, Applicants submit that the asserted element is not essential, and therefore is not required for claim 13.

Based on the foregoing comments, the above-identified application is believed to be in condition for allowance, and such allowance is courteously solicited. If any further amendment is necessary to advance prosecution and place this case in allowable condition, the Examiner is courteously requested to contact the undersigned by fax or telephone at the number listed below.

Please charge any cost incurred in the filing of this Amendment, along with any other costs, to Deposit Account No. 06-1510. If there are insufficient funds in this account, please charge the fees to Deposit Account No. 06-1505. A duplicate copy of this sheet is enclosed.

Please contact the undersigned with any questions or comments regarding this Amendment.


CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on August 31, 2004.

  
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Respectfully submitted,

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